

THE MANAGEMENT OF SCIENCE—FUTURE DIRECTIONS AND CHALLENGES. COMMUNITY PERSPECTIVE

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Perceptions are very much in the eye of the perceiver and are difficult to quantify. However, it is possible to trace significant changes in community perceptions if one looks back over the period between Hiroshima and Sputnik to the present. To illustrate these changes I have chosen to discuss one small area of science—the use of pesticides—which I believe reflects much of the changing community perceptions to science over this period.

In the 1950s, scientists involved in chemical control of pests and diseases were presented with a large array of extremely effective chemicals as judged by the criterion of rapid destruction of living organisms. Such scientists were seen as positive and productive members of society and fitted the traditional heroic image of scientists which had prevailed for the previous century. By the 1960s, Rachel Carson and others had blown the whistle on DDT but scientists in general failed to perceive the winds of change. They were preoccupied with the development of resistance by target organisms to pesticides but were not paying adequate attention to the growing environmental concern of the community, which incidentally included some of their more perceptive colleagues. In the 1970s, after the turbulent 1960s and in particular the use of crude 245 T in Vietnam, scientists began to realise that, like Vietnam veterans, they were returning from their campaigns as anti-heroes. Even in this climate, scientists persisted with their traditional logical and analytical defence. They argued that if such chemicals as 245 T were used with care, many tests and enquiries have proved them to be safe.

Scientists were bewildered to find that an increasing sector of the public did not accept their logic. Politicians whose jobs depend on judgements of public perception reflected the public disquiet and were much quicker to detect the fears of the public than scientists and they were influenced by a press that was quick to detect what interested the public. The politicians, because of this issue and others, began to query the credibility of scientists. So, scientists have arrived in the 1980s with a belated understanding that they must be accountable for their technologies in a very broad sociological and economic context. It is not that scientists had not heard, but rather that they have regarded their science as being of such value that social issues would somehow sort themselves out to adjust to technological advance.

The question we must now address with urgency is, how can scientists play their part in the introduction of technology in a manner which is acceptable to a community who on one hand embraces it and the other, fears it. The responsibility rests squarely on the managers of scientists who must be prepared to spend time in communication, education and negotiation—skills which are not part of their scientific training and which during the early working years appear to be unproductive and unlikely to bring status or reward. It is now not good enough for scientists to move to management for higher rewards or status with the naive belief that management is common sense and that anyone who thinks analytically and logically will soon encompass it as a vocation.